Special Issue

Animal Cognition and Decision Strategies: From Behaviour to Computation

Message from the Guest Editors

A central imperative in cognitive and behavioural neuroscience is to understand not just what an animal does, but how and why it decides to do what it does. Interpreting animal performance in behavioural tasks is inherently challenging, as most can be solved through multiple, often hidden, cognitive strategies. Animal models remain the cornerstone of behavioural neuroscience and neuroengineering, offering invaluable access to the neural, computational, and ecological drivers of behaviour. We welcome studies using classical species (e.g., non-human primates, rodents, zebrafish), as well as key emerging and non-traditional models (e.g., insects, cephalopods, songbirds), that advance our understanding of cognitive and behavioural processes. Moreover, we welcome contributions that infer latent cognitive processes from behaviour or apply computational or theoretical approaches to uncover the mechanisms of intelligent action. By uniting these perspectives, this Special Issue aims to advance our understanding of natural intelligence, fostering a new synthesis of insights that bridges behavioural neuroscience and AI.

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Deadline for manuscript submissions

31 July 2026

Biology

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 7.4
Indexed in PubMed

mdpi.com/si/248992

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